

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF THE CLAIMS:

1. (Currently amended) A method of authenticating an attached function for the purpose of permitting access by the attached function to network services associated with a network infrastructure including a network entry device and another network infrastructure device including an IEEE 802.1X Port Access Entity (PAE), the method comprising the steps of:

- a. configuring the network entry device to recognize authentication signals received from an attached function, and not to operate as a PAE authenticator;
- b. receiving at the network entry device from the attached function one or more signal packets;
- c. prior to authentication of the attached function, holding or discarding at the network entry device any non-authenticating signals of the one or more signal packets;
- d. forwarding by the network entry device only signal packets from the attached function including authentication information to the another network infrastructure device for authentication; and
- e. forwarding non-authenticating signals from the attached function through the network entry device only after authentication of the attached function by the PAE.

2. (Currently amended) The method as claimed in Claim 1 wherein further comprising the step of making the forwarding of non-authenticating signals is carried out as OSI Layer 2 bridging compatible with IEEE Standard 802.1D or IEEE Standard 802.1Q.

3. (Original) The method as claimed in Claim 2 further comprising the step of examining the signal packets for a reserved Media Access Control address and/or an Ethernet type.

4. (Original) The method as claimed in Claim 1 wherein the authentication information includes an Extensible Authentication Protocol message.

5. (Previously presented) The method as claimed in Claim 1 wherein the network infrastructure includes a plurality of network entry devices, each configured to recognize authentication signals to be received from an attached function, and not to operate as a PAE authenticator, the method further comprising the step of maintaining state for one or more sessions associated with the plurality of network entry devices.

6. (Previously presented) The method as claimed in Claim 5 wherein the step of maintaining state is performed by a tracking function of one or more devices of the network infrastructure devices including the plurality of network entry devices and the another network infrastructure device.

7. (Original) The method as claimed in Claim 1 further comprising the steps of recognizing through a tracking function of the network infrastructure authentication success messages and enabling a change of state associated with a forwarding function of the network entry device.

8. (Original) The method as claimed in Claim 7 wherein the tracking function forms part of the network entry device.

9. (Currently amended) A system to authenticate an attached function for the purpose of permitting access by the attached function to network services associated with a network infrastructure, the system comprising:

- a. a network entry device including a relay function configured to receive and forward only authentication signals from the attached function and to hold or discard any non-authenticating signals received from the attached function until after the attached function has been authenticated, wherein the network entry device is not an authenticator; and
- b. another network infrastructure device including an IEEE 802.1X Port Access Entity (PAE) configured to receive from the network entry device the forwarded authentication signals for authentication of the attached function before permitting

the network entry device, through the relay function, to forward non-authenticating signals from the attached function.

10. (Currently amended) The system as claimed in Claim 9 wherein the relay function forwards the non-authenticating signals in accordance with OSI Layer 2 bridging a manner compatible with IEEE Standard 802.1D or IEEE Standard 802.1Q.

11. (Original) The system as claimed in Claim 9 wherein the relay function is configured to recognize authentication signals for a reserved Media Access Control address and/or an Ethernet type.

12. CANCELLED.

13. CANCELLED.

14. (Previously presented) The system as claimed in Claim 9 further comprising a tracking function to monitor authentication messages and to enable a change of state associated with a forwarding function of the network entry device.

15. (Currently amended) A method of authenticating an attached function for the purpose of permitting access by the attached function to network services associated with a network infrastructure including a network entry device and another network infrastructure device, the another network infrastructure device including attached function authentication functionality, the method comprising the steps of:

- a. configuring the network entry device to recognize authentication signals received from an attached function, and not to operate as an authentication device;
- b. prior to authentication of the attached function, forwarding by the network entry device only signal packets from the attached function including authentication information to the another network infrastructure device for authentication; and

- c. forwarding non-authenticating signals from the attached function through the network entry device only after authentication of the attached function by the another network infrastructure device.

16. (Previously presented) The method as claimed in Claim 15 further comprising the step of forcing re-authentication of the attached function upon loss of signal packet exchange with the network entry device.

17. (Previously presented) The method as claimed in Claim 15 wherein the authentication functionality of the another network infrastructure device is an IEEE 801.1X Port Access Entity.

18. (Previously presented) The method as claimed in Claim 15 further comprising the steps of recognizing through a tracking function of the network infrastructure authentication success messages and enabling a change of state associated with a forwarding function of the network entry device.

19. (Currently amended) The method as claimed in Claim 15 further comprising the step of transferring one or more signal packets through the network entry device in accordance with OSI Layer 2 bridging a format compatible with IEEE Standard 802.1D or IEEE Standard 802.1Q.

20. (Previously presented) The method as claimed in Claim 18 wherein the authentication information includes an Extensible Authentication Protocol message.